

**Application No.:** 10/583,817  
**Filing Date:** December 8, 2008

## **REMARKS**

In response to the Office Action mailed September 30, 2010, Applicants respectfully request the Examiner to reconsider the above-captioned Application in view of the foregoing amendments and the following remarks. By this paper, Applicants have amended Claims 1, 2, 5-6, and 13, canceled Claims 2-3 and 10-13 without prejudice, and added Claims 17-22. Accordingly, Claims 1, 4-9 and 14-22 are currently pending in the present Application.

### **In re Drawings**

Figure 4 has been replaced with the enclosed Replacement Sheet, which addresses the concern noted in the Office Action with respect to missing reference number 12.

### **In re Specification**

The abstract has been amended to avoid the use of any legal terms, as noted in the objection made by the Examiner.

### **In Re Interview**

Applicant and Applicant's representatives wish to express their sincere gratitude to Examiner Eide for the courteous interview extended to the Applicant on December 7, 2010.

### **Claim Objections and Rejections under 35 U.S.C. §112**

Applicants have amended Claim 13 to clarify the language thereof in response to the objection made by the Examiner. Claim 3 has been canceled without prejudice.

Further, with respect to the Section 112 rejection, Applicants have amended Claim 1 to clarify the claim. Applicants also note that Claim 5 now has proper antecedent basis for the term "upper and/or lower portion." Next, Claim 6 has been amended to clarify the claim and remove the portion considered unclear by the Examiner. Claims 10-12 have been canceled, and the rejections with regard to the claims are now moot. Claim 13 has also been amended to clarify the claim. Accordingly, Applicants believe that the various amendments discussed above address and overcome the above noted objections and rejection noted in the Office Action.

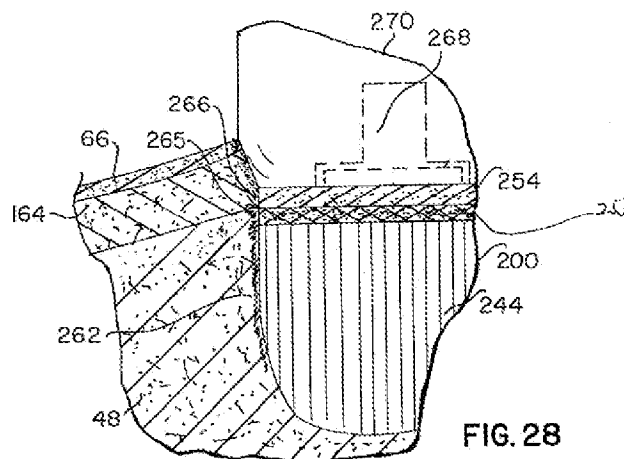
### **Prior Art Rejections**

Claims 1-2 and 6-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,419,491 issued to Ricci, et al. (hereinafter "Ricci"). While Applicants reserve the right to prosecute Claim 1 as originally filed, Applicants have amended Claim 1 to expedite prosecution of this Application. Claims 2-3 and Claims 10-13 have been canceled without

prejudice. Accordingly, Applicants respectfully request that the present rejection of Claim 1, 6-9 and 14 be withdrawn and that these claims be indicated as allowable.

In rejecting Claims 1-2 and 6-14, the Office Action argues that Figure 28 of Ricci (shown below) illustrates that the implant includes “a pattern of grooves in which greater than 20% of the grooves are capable of being configured so that the in the hole the grooves extend substantially at right angles to or parallel to the impinging forces.” The Office Action at page 5.

Applicants respectfully traverse this characterization of Ricci. Applicants respectfully submit that the hatching shown in collar 253, 254 do not represent a groove pattern but instead illustrate schematically that different regions of the implant of Ricci have different textures. That is, the hatching in Figure 28 does not correspond to the textures shown in Figures 1-6 of Ricci because the hatching is not intended to depict the “micro-textured” surface but merely represent regions that have different types of micro-textured surfaces. As additional evidence that the hatching in Figure 28 is schematic and does not depict a specific texture, the Examiner is directed to Figures 30-35 of Ricci which illustrate the microscopic nature of the disclosed textures in Ricci, which would not be visible or illustrated as the hatching shown in Figure 28.

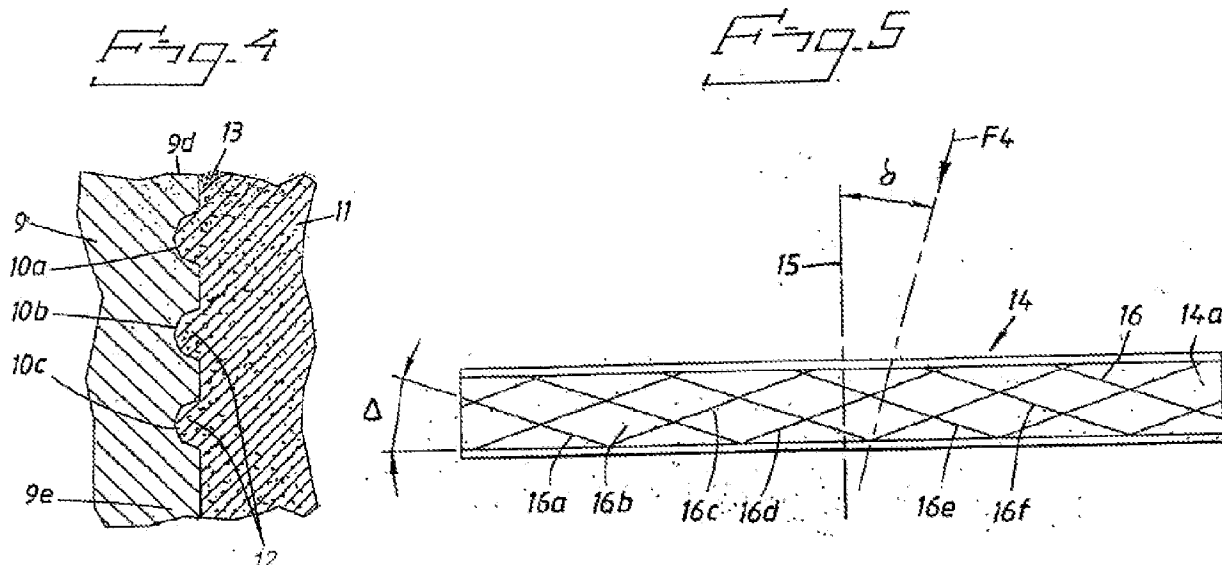


As noted during the personal interview, Figures 7-14 of Ricci do not represent a pattern of grooves but instead are represent a cross-section through the textures of Figures 1-6. “FIGS. 7 thru 14 are yz plane cross-sectional views of the patterns of FIGS. 1 thur 6...” Accordingly,

In contrast, Claim 1, as amended, recites an implant wherein, *inter alia*, one or more peripherally extending surfaces comprise “a pattern of grooves and/or recesses, at least a portion of the pattern of grooves and/or recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant, the pattern of

grooves and/or recesses including grooves and/or recesses extending in at least two directions of inclination and wherein the grooves and/or recesses have a depth (D) which lies in the range of about 50-100  $\mu\text{m}$  and a width (B) in the range of about 100-150  $\mu\text{m}$ .” That is, the pattern of grooves and/or recesses include grooves that are inclined with respect to a longitudinal axis of the implant and an axis that extend perpendicular to the longitudinal axis. In addition, the pattern of grooves and/or recesses includes grooves and/or recesses extending in at least two directions of inclination. Ricci and, in particular, Figures 1-6 of Ricci do not disclose a pattern of grooves and/or recesses with the above noted features.

With respect to one illustrated embodiment, Figures 4 and 5 of the present Application illustrate partial views of an implant comprising a pattern of grooves and/or recesses according to an embodiment within the scope of amended Claim 1. Figure 5 illustrates the grooves and/or recesses 16a, 16b, 16c, 16d, 16e, 16f are disposed on a peripherally extending surface 14a of the implant. As shown in Figure 5 (and Figures 6-7, not shown herein), at least a portion of the grooves and/or recesses 16a, 16b, 16c, 16d, 16e, 16f are inclined with respect to a longitudinal axis 15 of the implant and pattern of grooves and/or recesses includes grooves and/or recesses extending in at least two directions of inclination.



Applicants respectfully submit that Ricci fails to disclose at least the above noted features of Claim 1. Thus, the Ricci implant fails to teach each and every feature recited in Claim 1 and cannot support a prima facie case of obviousness.

Implants within the scope of Claim 1 provide unique advantages and benefits. For example, the claimed arrangement of the grooves and/or recesses permits the implant to effectively take up forces that are at varying angles with respect to the longitudinal axis of the implant. *See id.* at ¶ [0021]. For example, during chewing movements, the directions of forces applied to the implant can be inclined to the longitudinal direction of the implant. Such varying forces can also be encountered when the implant is inserted along a skewed axis with respect to the patient's bone. The varying directions of forces can cause an implant to loosen. The claimed arrangement provides for osteoconduction within the grooves and enables the implant to be resistant to such inclined forces.

Finally, Applicants note that Claims 3-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci, as applied to claim 1, and further in view of U.S. Patent No. 6,364,663 issued to Dinkelacker. Additionally, Claim 5 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci, as applied to Claim 1, and further in view of U.S. Publication No. 2004/0121286 issued to Aravena, et al. Further, Claims 15-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci, as applied to claim 9, and further in view of U.S. Patent No. 6,283,754 issued to Wöhrle. Applicants respectfully traverse these rejections and submits that these claims should be allowable based on their own merit and for at least the reason that these claims depend from allowable independent claims.

#### **New Claims 17-24**

Applicant has added new Claims 17-24. Claims 17-18 depend upon Claim 1 and are allowable based on their own merit and for at least the reason that these claims depend from an allowable base claim.

Claim 19 recites in part, a dental implant comprising a "collar including a pattern of grooves and/or recesses which are configured to be placed against a jaw bone part at an outlet opening of the hole, at least a portion of the pattern of grooves and/or recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant, the pattern of grooves and/or recesses including grooves and/or recesses extending in at least two directions of inclination and wherein the grooves and/or recesses have a depth (D) which lies in the range of about 50-100  $\mu\text{m}$  and a width (B) in the range of about 100-150  $\mu\text{m}$ ." Claim 19 is believed to be in condition for allowance.

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Further, Claims 20-22 which depend from Claim 19, are believed to be allowable based on their own merit and for at least the reason that these claims depend from an allowable independent base claim. Thus, Applicants respectfully request the allowance of new Claims 17-24.

**No Disclaimers or Disavowals**

Although the present communication may include alterations to the Application or claims, or characterizations of claim scope or referenced art, Applicants are not conceding in this Application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this Application. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present Application.

**CONCLUSION**

Applicants respectfully submit that the above rejections and objections have been overcome and that the present Application is now in condition for allowance. Therefore, Applicants respectfully request that the Examiner indicate that Claims 1-9 and 14-24 are now acceptable and allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Applicants respectfully submit that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicants respectfully traverse each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the amendments are made only to expedite prosecution of the present Application, and without

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prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Applicants also have not presented arguments concerning whether the applied references can be properly combined in view of, among other things, the clearly missing elements noted above, and Applicants reserve the right to later contest whether a proper reason exists to combine these references and to submit indicia of non-obviousness.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claim and drawings in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicants' attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: 12-30-2010

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